



## **INITIAL RESULTS:**

### **2002 Avian Inventory Report for Southern Colorado Plateau National Parks:**

*Aztec Ruins National Monument*

*El Malpais National Monument*

*El Morro National Monument*

*Petroglyph National Monument*

*Salinas Pueblo Missions National Monument*

*Yucca House National Monument*

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## 2002 Avian Inventory Initial Results in Southern Colorado Plateau National Parks

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This report details the initial, summary results of the second field season of the avian inventory of six National Parks and Monuments in the Southern Colorado Plateau Network. Birds surveys were conducted from mid-May to mid-July 2002 in Aztec Ruins NM (AZRU), El Malpais NM (ELMA), El Morro NM (ELMO), Petroglyph NM (PETR), Salinas Pueblo Missions NM (SAPU) and Yucca House NM (YUHO). The primary objective of the study is to provide a baseline inventory of avifauna in each park with the goal of documenting 90% of species present. A secondary objective is to determine general abundance and distribution of species present, identifying park-specific species of special concern. This report summarizes the survey effort and findings of the second field season, reporting the species detected and the total number of detections of each species over the entire survey period, and identifying any previously undetected species for each park. We are currently compiling data from both field seasons and additional bird information for each park; these data will be analyzed and summarized in our final report.

### METHODS

The primary sampling method was Variable Circular Plot (VCP) counts; this sampling method provides the data necessary to correlate bird data to vegetation (or other habitat information), and determine species richness, abundance and density. With VCP sampling, the observer stands at a sampling station and records the horizontal distance between the observer and the bird. Point count stations were located 250 m apart in each habitat type. Between each habitat type a 200 m buffer was implemented. Three to four visits were conducted to cover the period in which the greatest number of passerine bird species would be exhibiting breeding behavior, such as territorial calling and singing. Visits started at one-half hour after sunrise and were completed by 1000 hours. At each station, one observer recorded all individual birds seen or heard for 7 minutes, with counting subdivided into 3 periods: 0-3 minutes, 3-5 minutes and 5-7 minutes. Bird detections were recorded to the nearest meter. Laser rangefinders were used to estimate distance; these rangefinders can measure distances to rocks or trees where birds are detected within 1% accuracy. Flyover species were recorded in the same time periods, but with no estimates of distance. Additional notes were taken regarding whether detections were songs, calls, or other (e.g., drumming wings); whether the detection was aural, visual, or both; and whether the bird was detected at a previous point count station (to avoid double-counting individuals). Birds flushed while walking between point count stations were counted as additional observations. Field sheets were modeled after those recommended by Ralph et al. (1995).

Area searches were conducted in areas where it was possible to cover the entire survey area in a single morning, and that were too small to establish sufficient point count samples. During area searches, all individuals detected and the habitat in which they are detected are recorded.

We also conducted incidental surveys in addition to point count surveys. During incidental surveys, personnel went to the different habitats where point count surveys have been established and recorded all species they saw or heard. These surveys were conducted in conjunction with the standard survey protocol (i.e., point counts) during the breeding season. These surveys were conducted to increase the chance of detecting rare and secretive species that occur in the park units and may not be detected during point count surveys.

Finally, attempts were made to survey areas where less common species had been reported, as determined through records held by the park or Division of Wildlife, or from anecdotal species accounts.

At ELMA, ELMO, PETR and YUHO, habitat within the park was stratified according to slope, elevation and aspect. Random points were generated within each habitat type. Points were selected for accessibility and survey-ability. Those points which fell on a steep, inaccessible slope were moved whenever possible to nearby, contiguous terrain. Habitat and vegetation data were collected for each plot on a standardized form, and GPS coordinates were recorded at each point. Due to the small size of AZRU and SAPU, area searches were conducted instead of point count surveys; surveyors covered the entire area of each monument.

All road-kills and other specimens found dead were collected whenever feasible and frozen.

Parks were visited between 15 May and 15 July on three occasions during the 2002 field season; however, due to a fire in the Monument, we could only make two visits to ELMA. Point count surveys and area searches were conducted at ELMA, ELMO, PETR and YUHO; general bird observations (i.e., birds detected before, in-between and after point counts) were also recorded. At AZRU and SAPU, we conducted area searches that covered the entire site.

During all surveys, surveyors made careful observations of breeding behavior, and the following designations were made:

- **Confirmed Breeder:** direct evidence of breeding was observed, including nest building/presence, courtship behavior, food carry, and/or presence of juveniles;
- **Probable Breeder:** birds were detected during all three visits, and/or general references suggest the habitat and geographic location are suitable for breeding in, or in vicinity of the park; and
- **Migrant:** birds detected during only one visit (typically the first visit).

## DATABASE EFFORTS

Data managers and project coordinators of the SCP Inventory project collaborated to design a user-friendly database to store information collected during field surveys. A computer form was designed for data-entry, and project-specific queries and reports were generated to facilitate data analysis. Upon completion of inventories, the database will be provided to the monitoring program and park personnel.

The National Park Service has developed a database program (NPSpecies) to update and maintain information about the occurrence, abundance and status of species in all national park units. This data-base has provided essential information about avian species in southern Colorado Plateau park units. We intend to update this database with information gained from this project.

## RESULTS

Presented below are the initial results from the 2002 surveys, including lists of species observed, the total number of detections for all surveys combined, detection of special status species (i.e., species of concern, threatened Species, etc.), and breeding status (as determined from our field observations and review of published checklists). In addition, we identified species that were first detected during the 2002 field season (in bold letters), and those species previously unrecorded in a park (highlighted in gray), according to each Park's published checklist.

### Aztec Ruins National Monument (AZRU)

This is our second and final year of avian inventory at Aztec Ruins. During the 2002 breeding season, area search surveys were conducted covering the entire park, including shrubland, pinyon-juniper, grassland, urban vegetation, agricultural field and riparian habitat types. Because a Yellow-billed Cuckoo (YBCU) was detected in 2001, YBCU surveys were also completed, but none were detected. A list was generated of bird species detected during 2002 surveys (Table 1).

During area search surveys at AZRU, we detected 619 birds of 58 species (Table 1). We detected 13 species that were not detected in 2001, and six species previously undetected in the park. No U.S. Fish and Wildlife Service (USFWS) species of concern were detected.

**Table 1.** Bird species and total number of detections during three area search surveys at Aztec Ruins National Monument, May – July 2002. Species are listed by rank of abundance. Species in bold were not detected during 2001 surveys; species in shaded lines have not been recorded in the park prior to our surveys.

Rank	Status	Common Name	Scientific Name	No. Detected
1	CB	European Starling	<i>Sturnus vulgaris</i>	56
2	CB	Black-billed Magpie	<i>Pica pica</i>	43
3	PB	House Finch	<i>Carpodacus mexicanus</i>	35
4	PB	Mourning Dove	<i>Zenaida macroura</i>	34
5	CB	Gambel's Quail	<i>Callipepla gambelii</i>	27
6	CB	House Sparrow	<i>Passer domesticus</i>	26
7	CB	Brown-headed Cowbird	<i>Molothrus ater</i>	23
8	CB	American Robin	<i>Turdus migratorius</i>	21
9	PB	Canada Goose	<i>Branta canadensis</i>	21
10	PB	Cliff Swallow	<i>Hirundo pyrrhonota</i>	21
11	PB	Black-chinned Hummingbird	<i>Archilochus alexandri</i>	20
12	CB	Blue Grosbeak	<i>Guiraca caerulea</i>	20
13	CB	Bullock's Oriole	<i>Icterus bullockii</i>	17
14	CB	Black-headed Grosbeak	<i>Phenictus melanocephalus</i>	14
15	PB	Western Meadowlark	<i>Sturnella neglecta</i>	14
16	<b>PB</b>	<b>Pinyon Jay</b>	<i>Gymnorhinus cyanocephalus</i>	<b>13</b>
17	CB	Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>	13

18	PB	Bewick's Wren	<i>Thryomanes bewickii</i>	13
19	PB	Black-capped Chickadee	<i>Poecile atricapillus</i>	11
20	PB	Turkey Vulture	<i>Cathartes aura</i>	11
21	PB	Cassin's Kingbird	<i>Tyrannus vociferans</i>	11
22	PB	Lesser Goldfinch	<i>Carduelis psaltria</i>	11
23	<b>PB</b>	<b>Northern Mockingbird</b>	<i>Mimus polyglottos</i>	<b>11</b>
24	PB	Lark Sparrow	<i>Chondestes grammacus</i>	11
25	PB	Juniper Titmouse	<i>Baeolophus ridgwayi</i>	9
26	PB	Killdeer	<i>Charadrius vociferus</i>	9
27	CB	Chipping Sparrow	<i>Spizella passerina</i>	9
28	PB	Mallard	<i>Anas platyrhynchos</i>	8
29	CB	Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	8
30	CB	American Kestrel	<i>Falco sparverius</i>	8
31	PB	Black-throated Sparrow	<i>Amphispiza bilineata</i>	7
32	CB	Spotted Sandpiper	<i>Actitis macularia</i>	7
33	PB	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	6
34	CB	Western Scrub Jay	<i>Aphelocoma californica</i>	5
35	CB	Northern Flicker	<i>Colaptes auratus</i>	4
36	CB	American Crow	<i>Corvus brachyrhynchos</i>	4
37	PB	Say's Phoebe	<i>Sayornis saya</i>	4
38	PB	Violet-green Swallow	<i>Tachycineta thalassina</i>	4
39	PB	<b>Brewer's Blackbird</b>	<i>Euphagus carolinus</i>	<b>3</b>
40	PB	Common Raven	<i>Corvus corax</i>	3
41	PB	Western Wood-Pewee	<i>Contopus sordidulus</i>	3
42	M	Wilson's Warbler	<i>Wilsonia pusilla</i>	2
43	M	<b>White-crowned Sparrow</b>	<i>Zonotrichia leucophrys</i>	<b>2</b>
44	PB/M?	<b>Common Nighthawk</b>	<i>Chordeiles minor</i>	<b>2</b>
45	PB	Lazuli Bunting	<i>Passerina amoena</i>	2
46	PB	Great-horned Owl	<i>Bubo virginianus</i>	1
47	PB	<b>Brewer's Sparrow</b>	<i>Spizella breweri</i>	<b>1</b>
48	PB	<b>Ladder-backed Woodpecker</b>	<i>Picoides scalaris</i>	<b>1</b>
49	PB	<b>Spotted Towhee</b>	<i>Pipilo maculatus</i>	<b>1</b>
50	M	<b>Virginia's Warbler</b>	<i>Vermivora virginiae</i>	<b>1</b>
51	PB	<b>White-breasted Nuthatch</b>	<i>Sitta carolinensis</i>	<b>1</b>
52	PB	Western Bluebird	<i>Sialia mexicana</i>	1
53	PB	Western Kingbird	<i>Tyrannus verticalis</i>	1
54	PB	<b>Black-crowned Night Heron</b>	<i>Nycticorax nycticorax</i>	<b>1</b>
55	PB	<b>Red-tailed Hawk</b>	<i>Buteo jamaicensis</i>	<b>1</b>
56	CB	<b>Barn Owl *</b>	<i>Tyto alba</i>	<b>1</b>
57	M	Western Tanager	<i>Piranga ludoviciana</i>	1
58	M	Yellow Warbler	<i>Dendroica petechia</i>	1
<b>Total number of birds detected</b>				<b>619</b>

\* The Barn Owl was detected and identified by park personnel; with the Park's assistance, our surveyors located the abandoned nest.

## El Malpais National Monument (ELMA)

This was our first year of avian inventory at El Malpais. During the 2002 field season, 74 point count surveys were completed in four general habitat types (ponderosa pine, pinyon-juniper, grassland and shrubland). A list was generated of bird species detected during 2002 surveys (Table 2).

During point count surveys at El Malpais National Monument, we detected 682 birds of 58 species. We detected 48 birds of 23 species during incidental surveys; three bird species were detected during incidental surveys that were not detected during point count surveys (Table 2a).

**Table 2.** Bird species and total number of detections during point count surveys at El Malpais National Monument, May–July 2002. Species are listed by rank of abundance.

Rank	Status	Common Name	Scientific Name	No. Detected
1	CB	Mourning Dove	<i>Zenaida macroura</i>	35
2	CB	Chipping Sparrow	<i>Spizella passerina</i>	34
3	PB	Cassin's Kingbird	<i>Tyrannus vociferans</i>	34
4	PB	Red Crossbill	<i>Loxia curvirostra</i>	32
5	CB	Cliff Swallow	<i>Hirundo pyrrhonota</i>	32
6	CB	Western Wood-Pewee	<i>Contopus sordidulus</i>	31
7	CB	Spotted Towhee	<i>Pipilo maculatus</i>	27
8	CB	Rock Wren	<i>Salpinctes obsoletus</i>	24
9	PB	Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>	24
10	CB	Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>	23
11	CB	Mountain Chickadee	<i>Poecile gambeli</i>	22
12	CB	Western Bluebird	<i>Sialia mexicana</i>	22
13	CB	White-breasted Nuthatch	<i>Sitta carolinensis</i>	22
14	CB	Violet-green Swallow	<i>Tachycineta thalassina</i>	22
15	PB	Bushtit	<i>Psaltiriparus minimus</i>	21
16	PB	Dark-eyed Junco	<i>Junco hyemalis</i>	20
17	PB	Pygmy Nuthatch	<i>Sitta pygmaea</i>	16
18	PB	American Robin	<i>Turdus migratorius</i>	16
19	PB	Plumbeous Vireo	<i>Vireo plumbeus</i>	15
20	CB	White-throated Swift	<i>Aeronautes saxatalis</i>	14
21	CB	Hairy Woodpecker	<i>Picoides villosus</i>	14
22	CB	Hepatic Tanager	<i>Piranga flava</i>	13
23	PB	Juniper Titmouse	<i>Baeolophus ridgwayi</i>	13
24	PB	Northern Mockingbird	<i>Mimus polyglottos</i>	12
25	PB	Northern Flicker	<i>Colaptes auratus</i>	11
26	PB	Bewick's Wren	<i>Thryomanes bewickii</i>	10
27	PB	Steller's Jay	PB <i>Cyanocitta stelleri</i>	9
28	PB	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	9
29	PB	Gray Flycatcher	<i>Empidonax wrightii</i>	8
30	PB	Western Scrub Jay	<i>Apelocoma californica</i>	8
31	PB	Lark Sparrow	<i>Chondestes grammacus</i>	7
32	PB	Say's Phoebe	<i>Sayornis saya</i>	7
33	CB	Virginia's Warbler	<i>Vermivora virginiae</i>	7

34	PB	Black-throated Gray Warbler	<i>Dendroica nigrescens</i>	6
35	PB	Brown-headed Cowbird	<i>Molothrus ater</i>	6
36	PB	House Finch	<i>Carpodacus mexicanus</i>	5
37	PB	Broad-tailed Hummingbird	<i>Selasphorus platycercus</i>	5
38	PB	Scott's Oriole	<i>Icterus parisorum</i>	4
39	PB	Lesser Goldfinch	<i>Carduelis psaltria</i>	4
40	PB	Common Raven	<i>Corvus corax</i>	4
41	PB	Grace's Warbler	<i>Dendroica graciae</i>	4
42	PB	Western Tanager	<i>Piranga ludoviciana</i>	3
43	PB	American Kestrel	<i>Falco sparverius</i>	3
44	CB	Mountain Bluebird	<i>Sialia currucoides</i>	3
45	PB	Black-chinned Hummingbird	<i>Archilochus alexandri</i>	3
46	PB	Eastern Meadowlark	<i>Sturnella magna</i>	3
47	PB	Canyon Towhee	<i>Pipilo fuscus</i>	2
48	PB	Cordilleran Flycatcher	<i>Empidonax occidentalis</i>	2
49	PB	House Wren	<i>Troglodytes aedon</i>	2
50	M	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	1
51	PB/M?	Townsend's Solitaire	<i>Myadestes townsendi</i>	1
52	PB	Warbling Vireo	<i>Vireo gilvus</i>	1
53	PB	Green-tailed Towhee	<i>Pipilo chlorurus</i>	1
54	PB	Western Kingbird	<i>Tyrannus verticalis</i>	1
55	CB	Ladder-backed Woodpecker	<i>Picoides scalaris</i>	1
56	PB	Turkey Vulture	<i>Cathartes aura</i>	1
57	PB	Brown Creeper	<i>Certhia americana</i>	1
58	PB	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1
<b>Total number of birds detected</b>				<b>682</b>

**Table 2a.** Additional bird species and number detected during incidental surveys at ELMA, May-July 2002. Species in shaded lines have not been recorded in the park prior to our surveys.

Status	Common Name	Scientific Name	No. Detections
PB	Acorn Woodpecker	<i>Melanerpes formicivorus</i>	1
M?	Curve-billed Thrasher	<i>Toxostoma curvirostre</i>	1
PB	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1

## El Morro National Monument (ELMO)

This is our second and final year of avian inventory at El Morro. During the 2002 breeding season, point count surveys were conducted in pinyon-juniper and grassland habitat types. A bird species list was generated (Table 3). The published checklist of the birds of El Morro identifies birds known to have nested within the monument, and this information was included under the status column of Table 3 and Table 3a.

During point count surveys at ELMO, we detected 332 birds of 36 species (Table 3). We detected an additional 15 bird species during incidental surveys. We detected 11 species that were not detected in 2001, and five species previously undetected in the park. Two Peregrine Falcons were

detected; this species is listed as threatened at both the state and federal level.

**Table 3.** Bird species and total number of detections during point count at El Morro National Monument, May–July 2002. Species are listed by rank of abundance. Species in bold were not detected during 2001 surveys; species in shaded lines have not been recorded in the park prior to our surveys.

Rank	Status	Common Name	Scientific Name	No. Detected
1	CB	Western Meadowlark	<i>Sturnella neglecta</i>	36
2	CB*	Cassin's Kingbird	<i>Tyrannus vociferans</i>	31
3	CB	Lark Sparrow	<i>Chondestes grammacus</i>	30
4	CB	Chipping Sparrow	<i>Spizella passerina</i>	30
5	CB*	Green-tailed Towhee	<i>Pipilo chlorurus</i>	26
6	CB*	Spotted Towhee	<i>Pipilo maculatus</i>	22
7	CB	Common Raven	<i>Corvus corax</i>	20
8	CB*	Mourning Dove	<i>Zenaida macroura</i>	20
9	CB*	Vesper Sparrow	<i>Poocetes gramineus</i>	11
10	CB*	American Robin	<i>Turdus migratorius</i>	10
11	CB	Northern Mockingbird	<i>Mimus polyglottos</i>	10
12	CB*	Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>	9
13	CB	House Finch	<i>Carpodacus mexicanus</i>	8
14	CB*	Northern Flicker	<i>Colaptes auratus</i>	8
15	CB*	Western Scrub Jay	<i>Apelocoma californica</i>	7
16	CB*	Bewick's Wren	<i>Thryomanes bewickii</i>	7
17	CB	Cliff Swallow	<i>Hirundo pyrrhonota</i>	6
18	CB	Western Bluebird	<i>Sialia mexicana</i>	6
19	CB	White-throated Swift	<i>Aeronautes saxatalis</i>	5
20	PB	Western Wood-Pewee	<i>Contopus sordidulus</i>	5
21	CB	Black-chinned Hummingbird	<i>Archilochus alexandri</i>	4
22	PB/CB?	<b>Peregrine Falcon</b>	<i>Falco peregrinus</i>	<b>3</b>
23	CB*	Mountain Chickadee	<i>Poecile gambeli</i>	2
24	CB*	<b>Lesser Goldfinch</b>	<i>Carduelis psaltria</i>	<b>2</b>
25	CB*	Juniper Titmouse	<i>Baeolophus ridgwayi</i>	2
26	CB*	Say's Phoebe	<i>Sayornis saya</i>	2
27	PB	<b>Ladder-backed Woodpecker</b>	<i>Picoides scalaris</i>	<b>1</b>
28	CB*	White-breasted Nuthatch	<i>Sitta carolinensis</i>	1
29	CB*	<b>Plumbeous Vireo</b>	<i>Vireo plumbeus</i>	<b>1</b>
30	CB*	Western Tanager	<i>Piranga ludoviciana</i>	1
31	CB*	Rock Wren	<i>Salpinctes obsoletus</i>	1
32	M/PB?	<b>Loggerhead Shrike</b>	<i>Lanius ludovicianus</i>	<b>1</b>
33	CB	Lewis's Woodpecker	<i>Melanerpes lewis</i>	1
34	?	<b>Greater Roadrunner</b>	<i>Geococcyx californianus</i>	<b>1</b>
35	CB*	Broad-tailed Hummingbird	<i>Selasphorus platycercus</i>	1
36	PB	Black-throated Sparrow	<i>Amphispiza bilineata</i>	1
<b>Total number of birds detected</b>				<b>332</b>

\*The published Checklist of the Birds of El Morro National Monument identifies these species as "known to have nested within monument."



**Table 3a.** Additional bird species and number observed during incidental surveys at ELMO, May-July 2002. Species in bold were not detected during 2001 surveys; species in shaded lines have not been recorded in the park prior to our surveys.

	Status	Common Name	Scientific Name	No. Detections
	CB*	Violet-green Swallow	<i>Tachycineta thalassina</i>	4
	PB	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	3
	CB?	Bullock's Oriole	<i>Icterus bullockii</i>	3
	CB*	<b>Canyon Towhee</b>	<i>Pipilo fuscus</i>	<b>2</b>
	PB	<b>Lazuli Bunting</b>	<i>Passerina amoena</i>	<b>2</b>
	M	<b>Yellow-rumped Warbler</b>	<i>Dendroica coronata</i>	<b>2</b>
	CB*	Brown-headed Cowbird	<i>Molothrus ater</i>	1
	CB*	Canyon Wren	<i>Catherpes mexicanus</i>	1
	CB*	Cordilleran Flycatcher	<i>Empidonax occidentalis</i>	1
	PB	Gray Vireo	<i>Vireo vicinior</i>	1
	CB*	<b>Hairy Woodpecker</b>	<i>Picoides villosus</i>	<b>1</b>
	CB*	Hepatic Tanager	<i>Piranga flava</i>	1
	CB*	Pygmy Nuthatch	<i>Sitta pygmaea</i>	1
	PB	<b>Scaled Quail</b>	<i>Callipepla squamata</i>	<b>1</b>
	M	Warbling Vireo	<i>Vireo gilvus</i>	1

\* The published Checklist of the Birds of El Morro National Monument identifies these species as "known to have nested within monument."

## Petroglyph National Monument (PETR)

This is our second and final year of avian inventory at Petroglyph NM. During the 2002 field season, approximately 60 point count surveys were completed in two habitat types (grassland and shrubland). Incidental surveys were conducted before, during and after point count surveys. A list of bird species detected was generated (Table 4).

During point count surveys at Petroglyph National Monument, we detected 332 birds of 28 species (Table 4). We detected 20 birds of 10 species during incidental surveys; two bird species were detected during these surveys that were not detected during point count surveys (Table 4a). We detected five species that were not detected in 2001, and two species previously undetected in the park (see Table 4). No U.S. Fish and Wildlife Service (USFWS) species of concern were detected.

**Table 4.** Bird species and total number of detections during point count surveys at Petroglyph National Monument, May-July 2002. Species are listed by rank of abundance. Species in bold were not detected during 2001 surveys; species in shaded lines have not been recorded in the park prior to our surveys.

Rank	Status	Common Name	Scientific Name	No. Detected
1	CB	Mourning Dove	<i>Zenaida macroura</i>	69
2	PB	Eastern Meadowlark	<i>Sturnella magna</i>	31
3	PB	Scaled Quail	<i>Callipepla squamata</i>	29
4	CB	Cassin's Kingbird	<i>Tyrannus vociferans</i>	27
5	PB	Horned Lark	<i>Eremophila alpestris</i>	23
6	CB	Northern Mockingbird	<i>Mimus polyglottos</i>	20

7	CB	Black-chinned Hummingbird	<i>Archilochus alexandri</i>	17
8	PB	Rock Dove	<i>Columba livia</i>	16
9	CB	Rock Wren	<i>Salpinctes obsoletus</i>	14
10	PB	House Finch	<i>Carpodacus mexicanus</i>	13
11	PB	House Sparrow	<i>Passer domesticus</i>	10
12	PB	Black-throated Sparrow	<i>Amphispiza bilineata</i>	10
13	CB	Canyon Wren	<i>Catherpes mexicanus</i>	8
14	PB	Lark Sparrow	<i>Chondestes grammacus</i>	7
15	PB	<b>Rufous-crowned Sparrow</b>	<i>Aimophila ruficeps</i>	7
16	PB?	<b>Crissal Thrasher</b>	<i>Toxostoma crissale</i>	5
17	PB	Say's Phoebe	<i>Sayornis saya</i>	5
18	M	<b>Lincoln's Sparrow</b>	<i>Melospiza lincolnii</i>	4
19	CB	Western Meadowlark	<i>Sturnella neglecta</i>	4
20	PB	Cliff Swallow	<i>Hirundo pyrrhonota</i>	3
21	PB	Lesser Goldfinch	<i>Carduelis psaltria</i>	2
22	PB	Barn Swallow	<i>Hirundo rustica</i>	2
23	PB	American Kestrel	<i>Falco sparverius</i>	1
24	PB	Common Raven	<i>Corvus corax</i>	1
25	PB	Common Nighthawk	<i>Chordeiles minor</i>	1
26	PB	Bullock's Oriole	<i>Icterus bullockii</i>	1
27	PB	Brown-headed Cowbird	<i>Molothrus ater</i>	1
28	PB	<b>Long-eared Owl</b>	<i>Asio otus</i>	1
<b>Total number of birds detected</b>				<b>332</b>

**Table 4a.** Additional bird species and number detected during incidental surveys at Petroglyph National Monument, May–July 2002. Species in bold were not detected during 2001 surveys; species in shaded lines have not been recorded in the park prior to our surveys.

Status	Common Name	Scientific Name	No. Detections
PB	<b>Violet-green Swallow</b>	<i>Tachycineta thalassina</i>	<b>3</b>
PB	Gambel's Quail	<i>Callipepla gambelii</i>	1

### Salinas Pueblo Missions National Monument (SAPU)

This is our second and final year of inventory at Salinas Pueblo. Area search surveys were conducted at the Abo and Quarai sites. Surveys covered all habitat types (pinyon-juniper, shrubland and riparian) at each site. For this yearly summary inventory report, survey results from the two sites have been combined. A list of bird species detected during the 2002 surveys was generated (Table 5). We detected 13 species that were not detected in 2001, and two species previously undetected in the park.

During six area search surveys at Salinas Pueblo Missions National Monument, we detected a total of 981 birds of 64 species. No U.S. Fish and Wildlife Service (USFWS) species of concern were detected.

**Table 5.** Bird species and total number of detections during area search surveys at Salinas Pueblo Missions National Monument, May–July 2002. Species in bold were not detected during 2001 surveys; species in shaded lines have not been recorded in the park prior to our surveys.

Rank	Status	Common Name	Scientific Name	No. Detections
1	M?	Band-tailed Pigeon	<i>Columba fasciata</i>	95
2	CB	House Finch	<i>Carpodacus mexicanus</i>	75
3	CB	Spotted Towhee	<i>Pipilo maculatus</i>	51
4	PB	Lesser Goldfinch	<i>Carduelis psaltria</i>	48
5	CB	Northern Mockingbird	<i>Mimus polyglottos</i>	46
6	CB	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	40
7	CB	Blue Grosbeak	<i>Guiraca caerulea</i>	37
8	CB	Violet-green Swallow	<i>Tachycineta thalassina</i>	37
9	PB	Cliff Swallow	<i>Hirundo pyrrhonota</i>	33
10	CB	Mourning Dove	<i>Zenaida macroura</i>	33
11	PB	Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>	27
12	PB	Barn Swallow	<i>Hirundo rustica</i>	26
13	CB	Bushtit	<i>Psaltiriparus minimus</i>	26
14	PB	Juniper Titmouse	<i>Baeolophus ridgwayi</i>	24
15	CB	Western Scrub Jay	<i>Apelocoma californica</i>	23
16	CB	Western Wood-Pewee	<i>Contopus sordidulus</i>	23
17	CB?	Yellow-breasted Chat	<i>Icteria virens</i>	23
18	CB	Black-chinned Hummingbird	<i>Archilochus alexandri</i>	22
19	PB	Brown-headed Cowbird	<i>Molothrus ater</i>	20
20	CB	Lark Sparrow	<i>Chondestes grammacus</i>	17
21	M	Wilson's Warbler	<i>Wilsonia pusilla</i>	17
22	CB	Bewick's Wren	<i>Thryomanes bewickii</i>	16
23	PB	Cassin's Kingbird	<i>Tyrannus vociferans</i>	14
<b>24</b>	<b>CB</b>	<b>Phainopepla</b>	<i>Phainopepla nitens</i>	<b>14</b>
25	CB	Say's Phoebe	<i>Sayornis saya</i>	14
26	PB	Chipping Sparrow	<i>Spizella passerina</i>	13
<b>27</b>	<b>PB?</b>	<b>Warbling Vireo</b>	<i>Vireo gilvus</i>	<b>13</b>
28	CB	Rock Wren	<i>Salpinctes obsoletus</i>	12
<b>29</b>	<b>PB</b>	<b>Red-winged Blackbird</b>	<i>Agelaius phoeniceus</i>	<b>11</b>
30	CB	Bullock's Oriole	<i>Icterus bullockii</i>	10
31	PB?	Western Tanager	<i>Piranga ludoviciana</i>	10
32	CB	Common Raven	<i>Corvus corax</i>	8
33	M	MacGillivray's Warbler	<i>Oporornis tolmiei</i>	8
34	PB	Virginia's Warbler	<i>Vermivora virginiae</i>	8
35	M	White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	7
36	CB	Black Phoebe	<i>Sayornis nigricans</i>	6
37	PB	Canyon Towhee	<i>Pipilo fuscus</i>	6
38	CB	Cooper's Hawk	<i>Accipiter cooperii</i>	6
39	CB	Ladder-backed Woodpecker	<i>Picoides scalaris</i>	6
<b>40</b>	<b>CB</b>	<b>American Kestrel</b>	<i>Falco sparverius</i>	<b>5</b>
41	PB	American Robin	<i>Turdus migratorius</i>	5
42	CB	Western Bluebird	<i>Sialia mexicana</i>	5

43	PB	Western Meadowlark	<i>Sturnella neglecta</i>	5
44	M	House Wren	<i>Troglodytes aedon</i>	4
45	M?	Black-throated Gray Warbler	<i>Dendroica nigrescens</i>	3
<b>46</b>	<b>M</b>	<b>Lincoln's Sparrow</b>	<i>Melospiza lincolni</i>	<b>3</b>
47	CB	Northern Flicker	<i>Colaptes auratus</i>	3
48	CB	Great-horned Owl	<i>Bubo virginianus</i>	2
<b>49</b>	<b>M</b>	<b>Gray Catbird</b>	<i>Dumetella carolinensis</i>	<b>2</b>
50	PB	Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>	2
<b>51</b>	<b>PB</b>	<b>Scott's Oriole</b>	<i>Icterus parisorum</i>	<b>2</b>
<b>52</b>	<b>M</b>	<b>Scarlet Tanager</b>	<i>Piranga olivacea</i>	<b>1</b>
53	PB?	Turkey Vulture	<i>Cathartes aura</i>	2
<b>54</b>	<b>M</b>	<b>Yellow-rumped Warbler</b>	<i>Dendroica coronata</i>	<b>2</b>
55	PB	American Crow	<i>Corvus brachyrhynchos</i>	1
56	CB	Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>	1
<b>57</b>	<b>PB</b>	<b>Brewer's Blackbird</b>	<i>Euphagus carolinus</i>	<b>1</b>
58	PB?	Broad-tailed Hummingbird	<i>Selasphorus platycercus</i>	1
<b>59</b>	<b>M</b>	<b>Lazuli Bunting</b>	<i>Passerina amoena</i>	<b>1</b>
60	M	Mallard	<i>Anas platyrhynchos</i>	1
<b>61</b>	<b>M</b>	<b>Mountain Chickadee</b>	<i>Poecile gambeli</i>	<b>1</b>
62	PB	Plumbeous Vireo	<i>Vireo plumbeus</i>	1
<b>63</b>	<b>M</b>	<b>Red-naped Sapsucker</b>	<i>Sphyrapicus nuchalis</i>	<b>1</b>
64	PB	White-breasted Nuthatch	<i>Sitta carolinensis</i>	1
Total number of birds detected				981

### Yucca House National Monument (YUHO)

This is our second year of avian inventory at Yucca House. During visit one of the 2002 field season, area search surveys were conducted; these surveys covered the majority of the monument. During visits two and three, approximately 40 point count surveys were carried out in three general habitat types (pinyon-juniper, shrubland, and agricultural fields). Incidental surveys were conducted before, during and after point count surveys. A list of bird species detected was generated (Table 6).

During point count surveys at Yucca House National Monument, we detected 333 birds of 47 species (Table 6). During area search and incidental surveys, we detected 217 birds of 44 species; five bird species were detected during area search surveys that were not detected during point count surveys (Table 6a). We detected five species that were not detected in 2001 (see Tables 6 and 6a). A Peregrine Falcon (*Falco peregrinus anatum*) was detected within the Monument; this species is listed as threatened at both the state and federal level.

**Table 6.** Bird species and total number of detections during point count surveys at Yucca House National Monument, May–July 2002. Species are listed by rank of abundance. Species in bold were not detected during 2001 surveys.

Rank	Status	Common Name	Scientific Name	No. Detections
1	CB	Western Meadowlark	<i>Sturnella neglecta</i>	33
2	PB	Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>	23
3	PB	Mourning Dove	<i>Zenaida macroura</i>	23
4	PB	Spotted Towhee	<i>Pipilo maculatus</i>	22

5	PB	House Finch	<i>Carpodacus mexicanus</i>	21
6	CB	Cassin's Kingbird	<i>Tyrannus vociferans</i>	13
7	PB	Lesser Goldfinch	<i>Carduelis psaltria</i>	13
8	CB	Bewick's Wren	<i>Thryomanes bewickii</i>	12
9	CB	Black-billed Magpie	<i>Pica pica</i>	12
10	CB	Brown-headed Cowbird	<i>Molothrus ater</i>	11
11	PB	Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>	10
12	PB	Juniper Titmouse	<i>Baeolophus ridgwayi</i>	10
13	PB	Gray Vireo	<i>Vireo vicinior</i>	10
14	PB	Brewer's Sparrow	<i>Spizella breweri</i>	8
15	PB	Gray Flycatcher	<i>Empidonax wrightii</i>	8
16	PB	Chipping Sparrow	<i>Spizella passerina</i>	8
17	PB	Northern Mockingbird	<i>Mimus polyglottos</i>	7
18	CB	Black-chinned Hummingbird	<i>Archilochus alexandri</i>	7
19	PB	Violet-green Swallow	<i>Tachycineta thalassina</i>	6
20	PB	White-throated Swift	<i>Aeronautes saxatalis</i>	6
21	PB	Blue Grosbeak	<i>Guiraca caerulea</i>	6
22	PB	Bullock's Oriole	<i>Icterus bullockii</i>	6
23	CB	<b>Black-throated Gray Warbler</b>	<i>Dendroica nigrescens</i>	5
24	PB	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	5
25	CB	Bushtit	<i>Psaltiriparus minimus</i>	4
26	CB	Black-throated Sparrow	<i>Amphispiza bilineata</i>	4
27	PB	Western Scrub Jay	<i>Apbelocoma californica</i>	4
28	PB	Ring-necked Pheasant	<i>Phasianus colchicus</i>	4
29	PB	European Starling	<i>Sturnus vulgaris</i>	4
30	PB	Lark Sparrow	<i>Chondestes grammacus</i>	3
31	PB	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	3
32	PB	Common Raven	<i>Corvus corax</i>	3
33	PB	Scaled Quail	<i>Callipepla squamata</i>	2
34	PB	Northern Harrier	<i>Circus cyaneus</i>	2
35	PB	Loggerhead Shrike	<i>Lanius ludovicianus</i>	2
36	CB	Western Wood-Pewee	<i>Contopus sordidulus</i>	2
37	PB	Western Kingbird	<i>Tyrannus verticalis</i>	1
38	PB	American Robin	<i>Turdus migratorius</i>	1
39	PB	American Kestrel	<i>Falco sparverius</i>	1
40	PB	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1
41	PB	Rock Wren	<i>Salpinctes obsoletus</i>	1
42	PB	<b>Black-capped Chickadee</b>	<i>Poecile atricapillus</i>	1
43	PB/M?	<b>Grasshopper Sparrow</b>	<i>Ammodramus savannarum</i>	1
44	CB	Mountain Bluebird	<i>Sialia currucoides</i>	1
45	PB	Killdeer	<i>Charadrius vociferus</i>	1
46	PB	<b>House Wren</b>	<i>Troglodytes aedon</i>	1
47	PB	Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>	1
<b>Total number of birds detected</b>				<b>333</b>

**Table 6a.** Additional bird species and number detected during area search and incidental surveys at Yucca House National Monument, May–July 2002. Species in bold were not detected during 2001 surveys.

Status	Common Name	Scientific Name	No. Detections
PB	Brewer's Blackbird	<i>Euphagus carolinus</i>	1
PB	Common Nighthawk	<i>Chordeiles minor</i>	1
PB	House Sparrow	<i>Passer domesticus</i>	6
<b>PB</b>	<b>Lincoln's Sparrow</b>	<i>Melospiza lincolnii</i>	<b>1</b>
PB	Yellow Warbler	<i>Dendroica petechia</i>	1

### PROJECT COMPLETION SCHEDULE

Inventories for AZRU, ELMO, PETR, and SAPU are complete; we will conduct another season of surveys in 2003 at ELMA and YUHO. Reports will be produced and distributed as described in the proposal. A project completion schedule follows.

15 Dec 2002	Send out SCP 2002 Avian Inventory Draft Annual Report for review
31 Jan 2003	Distribute SCP 2002 Avian Inventory Annual Report
Summer 2003	Field work: continue avian inventories at ELMA and YUHO
30 Sept 2003	Complete SCP 2003 Initial Results Report
31 Jan 2004	Complete Final SCP Avian Inventory Report; 2003 annual report will be included as part of the Final Report